$\vec{v}_{1}, \vec{v}_{2}, \ldots \vec{v}_{k}$ is linearly independent if
The span of $\vec{v}_{1}, \vec{v}_{2}, \ldots \vec{v}_{k}$ is
$\vec{v}$ is a linear combination of $\vec{v}_{1}, \vec{v}_{2}, \ldots \vec{v}_{k}$ if $\vec{v}_{1}, \vec{v}_{2}, \ldots \vec{v}_{k}$ span $\mathbb{R}^{n}$ if

If a matrix $A_{m \times n}$ has full row pivots
If a matrix $A_{m \times n}$ has full column pivots
line vector $\vec{v}$ is on
determinant of $3 \times 3$ via Laplace expansion
subspace
basis for a subspace
column space of $A$
null space of $A$
eigenvalue
eigenvector
eigenvector decomposition

